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On the Scaphisomatini (Coleoptera: Staphylinidae: Scaphidiinae) of the Philippines, II

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On the Scaphisomatini (Coleoptera: Staphylinidae: Scaphidiinae) of the Philippines, II - The Philippine species of *Scaphobaeocera* and *Xotidium* are reviewed and a key to the species of *Scaphobaeocera* is provided. The following new species are described: *Scaphobaeocera bulbosa* sp. n., *S. complicans* sp. n., *S. data* sp. n., *S. davaoana* sp. n., *S. episternalis* sp. n., *S. escensa* sp. n., *S. excisa* sp. n., *S. hamata* sp. n., *S. monticola* sp. n., *S. montivagans* sp. n., *S. orousseti* sp. n., *S. palawana* sp. n., *S. pseudotenella* sp. n., *S. pubiventris* sp. n., *S. serpentis* sp. n., *S. watrousi* sp. n., *S. werneri* sp. n., and *Xotidium tubuliferum* sp. n. *Scaphobaeocera sabapensis* Löbl is reported for the first time from the Philippines.

Keywords: Coleoptera - Staphylinidae - Scaphidiinae - Scaphisomatini - taxonomy - Philippines

INTRODUCTION

The present paper deals with the Philippine species of *Scaphobaeocera* Csiki, 1909 and *Xotidium* Löbl, 1992, both belonging to the *Baeocera* group (see Leschen & Löbl, 2005). Members of these two genera have the body laterally compressed and the ventrites are highly vaulted, both features correlated with approximate metacoxae. The third and more species-rich genus of the group occurring in the Philippines, *Baeocera* Erichson, 1845, will be treated in a separate study. These three genera share two unreversed synapomorphies: aciculate maxillary palpi and the presence of prothoracic corbicula. While *Baeocera* is almost cosmopolitan in distribution, *Scaphobaeocera* is absent from the New World and occurs mainly in the tropics and subtropics of Asia. Members of *Scaphobaeocera* are commonly found in samples of moist forest litter and rotten wood and are according to the so far available observations myxomycetophagous. *Xotidium* is a poorly known group of a few tropical species. Data on their host preferences are not available.

Both, *Scaphobaeocera* and *Xotidium*, may be distinguished from other Scaphisomatini genera by keyes given in Löbl (1992) and Leschen & Löbl (2005). Most species of *Scaphobaeocera* have elytra iridiscent and each with a fine parasutural stria. Eventually also other body parts are iridescent, due to the presence of fine, transversely striate microsculpture. These features are unknown in other Scaphisomatini.

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MATERIAL AND METHODS

Most of the material dealt with in the present study was found in samples of forest litter and rotten wood, and extracted in winkler-moczarski or berlese devices. The specimens studied are housed in the following institutions:

FMNH Field Museum of Natural History, Chicago
MHNG Muséum d'histoire naturelle, Geneva
SMNS Staatliches Museum für Naturkunde, Stuttgart

The methods are as in Löbl (1992). The species of *Scaphobaeocera* are given below in alphabetic order, for convenience and because species groups were not yet defined within the genus.

TAXONOMY

Scaphobaeocera Csiki, 1909

This genus comprises 77 species currently recognized as valid. Its range covers large parts of tropical and subtropical Asia, extending to warm temperate areas of Far East Russia, the Pacific islands, Australia, Africa, Seychelles and the Mascarene archipelago. Only one species, *S. minutissima* (Löbl, 1969), was so far reported from the Philippines (Löbl, 1969, 1972, 1997). It is notable that this species was absent from extensive modern collections. It was based on a single specimen found in an old collection that comes, according to its label data, from Mount Makiling. *Scaphobaeocera* appears particularly diverse on Mount Makiling where eight of the 19 Philippine species were found. However, this fact may be explained rather by the more intensive field work in the easily accessible sites of that mountain than by diversity patterns.

KEY TO THE PHILIPPINE SPECIES OF *SCAPHOBAEOCERA*

1 Antennomere VII longer than antennomeres IV to VI combined and more than 5 times as long as antennomere VIII . . . . . *S. escensa* sp. n.
- Antennomere VII much shorter than antennomeres IV to VI combined and much less than 5 times as long as antennomere VIII 2
2 Antennomere XI about 2 or 2.5 times as long as antennomere X and about 3 to 5 times as long as wide 3
- Antennomere XI about 1.2 to 1.5 times as long as antennomere X and about 2 to 3 times as long as wide 7
3 Hypomeron lacking stria . . . . . *S. palawana* sp. n.
- Hypomeron with longitudinal stria 4
4 Elytra microsculptured and usually iridescens 5
- Elytra not microsculptured and not iridescent. Aedeagus without spiral flagellum 6
5 Small species 1.0 mm long. Lateral parts of metaventrite distinctly punctate. Basolateral parts of abdominal ventrite 1 not microsculptured. Aedeagus with flagellum simple, spiral . . . . . *S. minutissima* (Löbl)
- Medium-sized species 1.3-1.4 mm long. Lateral parts of metaventrite extremely finely punctate. Entire abdominal ventrite 1 distinctly micro - sculptured . . . . . *S. montivagans* sp. n.

6 Abdominal ventrite 1 with microsculpture consisting of transverse striae. Aedeagus with simple internal sac . . . . . *S. watrousi* sp. n.
- Abdominal ventrite 1 lacking microsculpture. Aedeagus with complex internal sac . . . . . *S. complicans* sp. n.
7 Elytra with sutural striae extending along basal margins. Punctures margining mesocoxal lines coarse and extended laterally along mesepimera . . . . . *S. excisa* sp. n.
- Elytra with sutural striae not extending along basal margins. Punctures margining mesocoxal lines not extending laterally and usually very fine 8
8 Hypomeron with longitudinal stria. Male with apicomedian surface of metasternum completely covered by conspicuously dense patch of pubescence . . . . . *S. pubiventris* sp. n.
- Hypomeron lacking stria. Male with pubescence not completely covering apicomedian surface of metasternum 9
9 Elytra with sutural striae shortened, starting clearly posterior pronotal lobe . . . . . *S. monticola* sp. n.
- Elytra with sutural striae starting near basal margins and usually curved along pronotal lobe 10
10 Thorax and elytra lacking obvious microsculpture, not iridescent 11
- Thorax and/or elytra microsculptured, elytra usually distinctly iridescent . . . 13
11 Metepisterna about 0.05 mm wide, with straight suture. Punctures bordering mesocoxal lines fine . . . . . *S. davaoana* sp. n.
- Metepisterna about 0.08-0.14 mm wide, with arcuate suture. Punctures bordering mesocoxal lines coarse 12
12 Elytra with parasutural striae. Antennomere VIII about 2.5 times as long as wide. Metepisterna conspicously large, 0.10-0.14 mm wide, with suture strongly arcuate . . . . . *S. episternalis* sp. n.
- Elytra without parasutural striae. Antennomere VIII conspicuously small, only slightly longer than wide. Metepisterna 0.08-0.10 mm wide, with suture weekly arcuate . . . . . *S. serpentis* sp. n.
13 Median lobe of aedeagus without prominent ventral processes or tubercles . 14
- Median lobe of aedeagus with prominent ventral processes or tubercles 17
14 Aedeagus with flagellum of internal sac sinuate, not forming circles 15
- Aedeagus with flagellum of internal sac forming complete circle 16
15 Elytra with distinct parasutural striae. Metepisterna very narrow. Flagellum lacking basal hook . . . . . *S. werneri* sp. n.
- Elytra without or with hardly visible parasutural striae. Metepisterna fairly wide. Flagellum with basal hook . . . . . *S. hamata* sp. n.
16 Aedeagus with flagellum of internal sac evenly narrow, except at abruptly widened base. Parameres shorter than basal bulb of median lobe . . . . . *S. bulbosa* sp. n.
- Aedeagus with flagellum of internal sac gradually narrowed apically, without abruptly widened base. Parameres longer than basal bulb of median lobe . . . . . *S. sabapensis* Löbl
17 Aedeagus with ventral processes of median lobe approximate. Parameres not widened apically . . . . . *S. orousseti* sp. n.

- Aedeagus with ventral processes of median lobe distant. Parameres widened apically 18
18 Aedeagus with flagellum of internal sac strongly sinuate, weakly widened basally, without basal hook . . . . . *S. pseudotenella* sp. n.
- Aedeagus with flagellum of internal sac weakly sinuate, strongly widened basally, with basal hook . . . . . *S. data* sp. n.

Scaphobaeocera bulbosa sp. n. Figs 1, 2

HOLOTYPE: ♂, Luzon, Lagunas Prov., Mt. Makiling, 400m, summit road, 19.XI.1995, I. Löbl (MHNG).

PARATYPES: 1 ♀ with the same data as the holotype; Lagunas Prov., Mt. Makiling, summit rd., 600m, 21.XI.95, I. Löbl. – 1 ♀, Lagunas Prov., Mt. Makiling, summit rd., 600m, 21-22.XI.1995, I. Löbl. – 1 ♂, Lagunas Prov., Mt. Makiling, above Mad Springs, 400-700m, 19-22.XI.1995, J. Kodada leg. – 1 ♂, Lagunas Prov., Mt. Banahaw ca 1 km Kinabuhayan, 500m, 26.XI.1995, I. Löbl leg (all MHNG).

DESCRIPTION: Length 1.05-1.25 mm, width 0.57-0.70 mm, dorsoventral diameter 0.59-0.72 mm. Head and body very dark, almost blackish, femora rufous, apical abdominal segments and remainder of appendages lighter, ochraceous. Thorax and elytra microsculptured, elytra very weakly iridescent. Pronotal and elytral punctation very fine, distinct at magnification 50x, punctation becoming somewhat coarser toward elytral apices. Length ratio of antennomeres as: III 5: IV 8: V 10: VI 9: VII 10: VIII 9: IX 12: X 12: XI 15. Segments III to VI equally narrow, segment III about twice as long as wide, segment V about 4 times as long as wide. Segments VII to IX each about 3 times as long as wide, segment VIII wider than segment VI. Segment XI almost 3 times as long as wide. Tip of scutellum exposed. Elytra with parasutural striae hardly visible, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron lacking longitudinal stria, with striate microsculpture. Middle part of metaventrite flat, with small, shallow impression in middle, densely and finely punctate, and short pubescence. Sides of metaventrite sparsely, extremely finely punctate, with long pubescence. Mesocoxal lines with very fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.03-0.05 mm long. Metepisterna flat, exposed portion about 0.06 mm wide, parallel-sided, with straight suture. Abdomen with fairly distinct striate microsculpture, very finely punctate. Basal punctures of ventrite 1 very fine. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 slightly widened, much narrower than protibiae. Aedeagus (Figs 1, 2) 0.28-0.31 mm long.

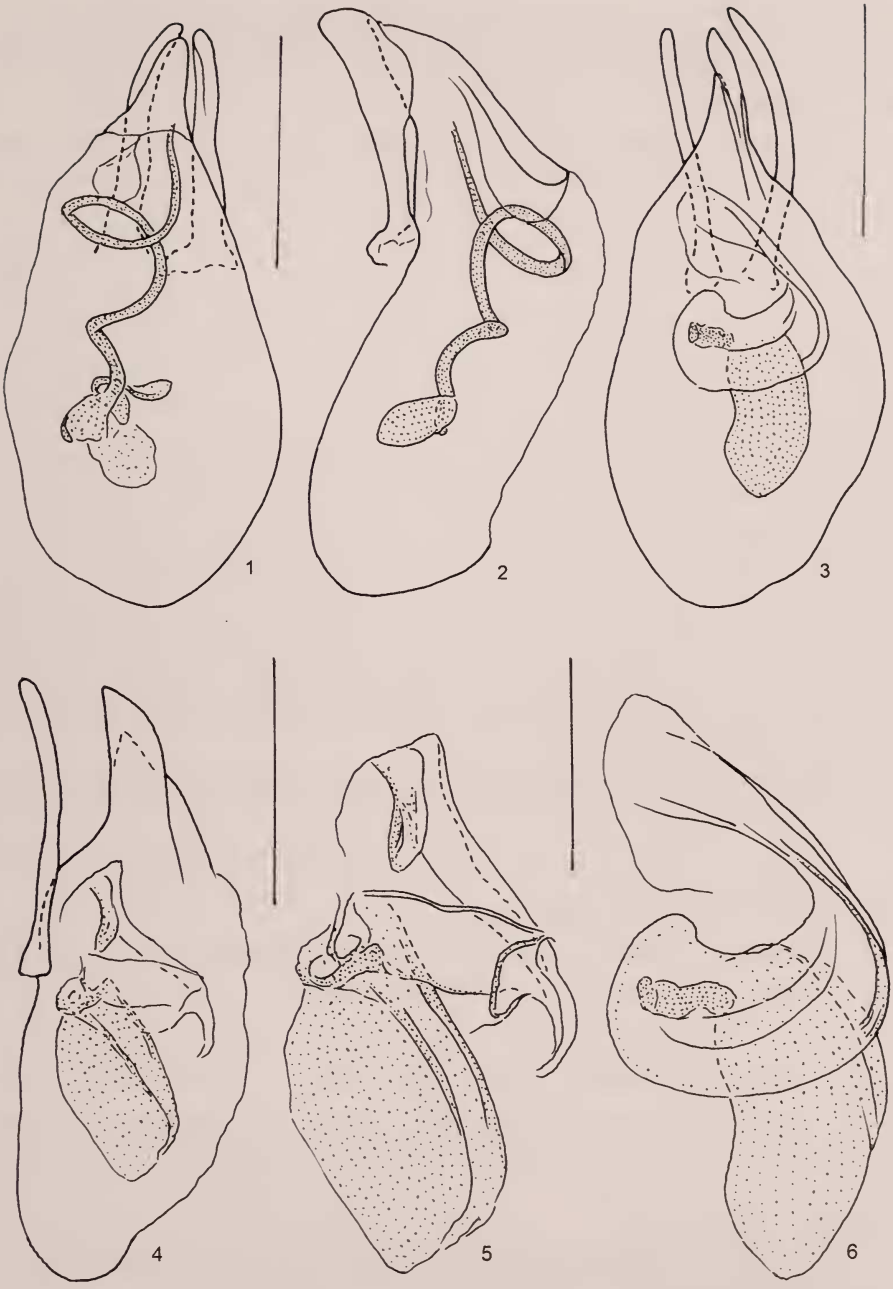
HABITAT: Degraded evergreen rain forest, in leaf litter and samples of moss and epiphytes on logs, under bark.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: This species is in external characters very similar to *S. sabapensis* Löbl, 1990. It may be distinguished from the latter by the aedeagus with shorter and thicker apical part of the median lobe, shorter parameres, and distinctive shape of the flagellum.

Scaphobaeocera complicans sp. n. Figs 3-6

HOLOTYPE: ♂, Luzon, Lagunas Pref., Mt. Makiling, summit rd., ca 600m, 26.XI.1995, I. Löbl (MHNG).



FIGS 1-6

(1, 2) *Scaphobaeocera bulbosa* sp. n., aedeagus in dorsal and lateral views; scale bar = 0.1 mm. (3-6) *Scaphobaeocera complicans* sp. n., aedeagus (3, 4) and internal sac (5, 6) in dorsal and lateral views. Scale bars = 0.2 mm for aedeagus, = 0.1 mm for internal sac.

PARATYPES: 7 ♂, 13 ♀, with the same data as the holotype. – 1 ♂, Philippines,Mt. Makiling, Lagunas Prov. 4 km SE Los Banos, 12-IV-1977 / berlese rotten logs L. E. Watrous. – 1 ♂ with the same data but 9-IV-1977 and berlese rotten figs (all MHNG).

DESCRIPTION: Length 1.05-1.20 mm, width 0.57-0.68 mm, dorsoventral diameter 0.65-0.75 mm. Body rufous, apical abdominal segments and appendages light ochraceus to yellowish. Thorax, elytra and abdominal ventrite 1 not microsculptured and not iridescent. Pronotal and elytral punctation very fine, that on elytra slightly coarser than on pronotum. Length ratio of antennomeres as: III 4: IV 8: V 9: VI 7: VII 10: VIII 6: IX 9: X 10: XI 26. Segment III short and narrow, about twice long as wide. Segments IV as narrow as segment III. Segments V and VI slightly wider than segment IV, segment V about 3 to 4 times as long as wide. Segment VII about 2.5 times as long as wide. Segment VIII twice as long as large. Segments IX and X slightly wider than segment VII. Segment XI conspicuously long, about 5 times as long as wide. Tip of scutellum exposed. Elytra with very fine parasutural striae, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron with stria. Middle part of metaventrite hardly convex, lacking stria or impression, with dense and fairly fine punctation except on narrow anterior area, and with fairly long pubescence. Sides of metaventrite sparsely and finely punctate, with long pubescence. Mesocoxal lines with fine marginal punctures, not extending laterally along mesepimera; submesocoxal areas about 0.03 mm long. Metepisterna flat, with exposed portion about 0.06-0.08 mm wide, parallel-sided, with straight suture. Abdominal ventrite 1 very finely punctate, with basal punctures fine, partly somewhat elongate. Following sternites with punctulate microsculpture. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 moderately widened, narrower than protibiae. Aedeagus (Figs 3-6) 0.44-0.53 mm long.

HABITAT: Evergreen rain forest, fungi on large log, in rotten log and on rotten figs.

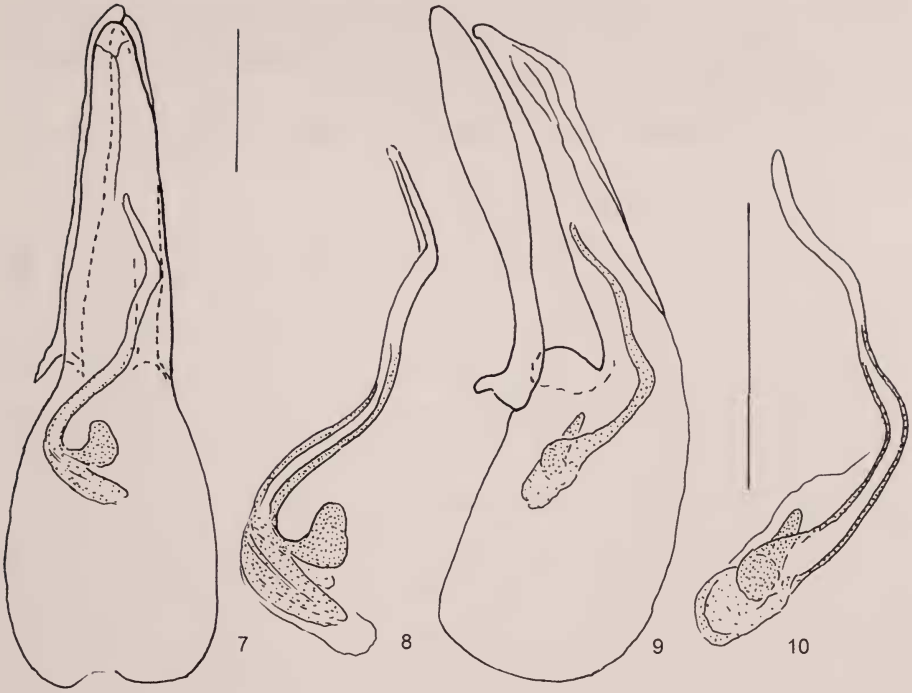
DISTRIBUTION: Philippines: Luzon.

COMMENTS: Several members of *Scaphobaeocera* have conspicuously long apical antennomere, compared to the antennomeres VII and X (*S. abnormalis* Löbl, 1981, *S. antennalis* Löbl, 1975, *S. cyrta* Löbl, 1980, *S. delicatula* Löbl, 1971, *S. dispar* Löbl, 1980, *S. dorsalis* Löbl, 1980, *S. japonica* (Reitter, 1880), *S. minutissima* (Löbl, 1969), *S. ponapensis* Löbl, 1981, *S. remota* Löbl, 1981, and *S. stephensoni* Löbl, 1988). *Scaphobaeocera complicans* may be easily distinguished from those species by the shape of the internal sac of the aedeagus, in particular by its strongly expanded apical part and the bulbous basal part.

Scaphobaeocera data sp. n. Figs 7-10

HOLOTYPE: ♂, Luzon Mount Data Lodge 2200-2300m 22-23.XII.1979, L. Deharveng & J. Orousset #100 (MHNG).

PARATYPES: 26 ♂, 15 ♀, with the same data as the holotype; 2 ♂, with the same data but #86. – 1 ♀, 1 ♀, with the same data but #162; Mount Data, 9.I.80, J. Orousset #165. – 3 ♂, 5 ♀, Luzon, Mt. Data (2250m) Mountain Prov., 13., 14., 25. and 26. VII.1985, M. Sakai leg. – 2 ♂, Luzon Mt. Fangao, (2350m) Mountain Prov., 14.VII.1985, M. Sakai leg. – 2 ♂, 14 ♀, Pacay (2400m) nr. Sayangan Benguet Prov., 11. VII.1985, M. Sakai leg. (all MHNG).



FIGS 7-10

(7-10) *Scaphobaeocera data* sp. n., aedeagus (7, 9) and internal sac (8, 10) in dorsal and lateral views.

DESCRIPTION: Length 1.15-1.30 mm, width 0.65-0.73 mm, dorsoventral diameter 0.70-0.78 mm. Body very dark reddish-brown to almost black, apices of elytra usually lighter, apical abdominal segments and appendages ochraceous. Thorax, elytra and abdomen microsculptured and iridescent. Pronotal and elytral punctation very fine, hardly visible at magnification 100x. Length ratio of antennomeres as: III 6: IV 8: V 10: VI 8: VII 10: VIII 7: IX 10: X 10: XI 16. Segments III and IV equally narrow, segment III about 3 times as long as wide. Segments V and VI wider than segment IV, each about 3 times as long as wide. Segment VII almost 3 times as long as wide. Segment VIII slightly narrower than segment VII, about twice as long as wide. Segments IX and X distinctly wider than segment VII, each about twice as long as wide. Segment XI about 2.5 times as long as wide. Scutellum entirely concealed. Elytra with very fine parasutural striae, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron without stria. Middle part of metaventrite flat, with shallow stria, very dense and fine punctation, and very short pubescence. Sides of metaventrite sparsely and very finely punctate, with long pubescence. Mesocoxal lines with fine marginal punctures, not extending laterally along mesepimera; submesocoxal areas about 0.02-0.03 mm long. Metepisterna flat, with exposed portion about 0.04-0.06 mm wide, parallel-sided, with straight suture.

Abdomen with distinct microsculpture consisting of transverse striae. Abdominal ventrite 1 very finely punctate, with basal punctures fine, not elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 distinctly widened, narrower than protibiae. Aedeagus (Figs 7-10) 0.36-0.40 mm long.

HABITAT: Mountain broad-leaf forest, under bark, in rotten wood and floor litter.

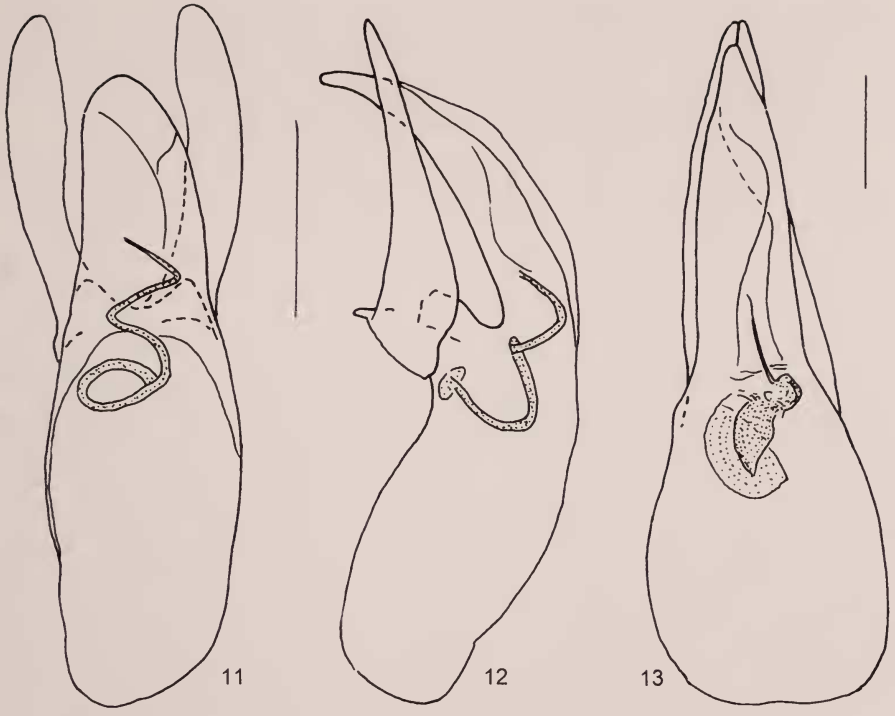
DISTRIBUTION: Philippines: Luzon.

COMMENTS: As in *S. data*, the Asian *S. cyrta* Löbl, 1980, *S. discreta* Löbl, 1980 and *S. smetanai* Löbl, 1981 possess flagellar basal hook and the median lobe of the aedeagus is lacking ventral processes. The new species may be distinguished from them by the convex apicoventral side of the basal bulb. Besides, *S. smetanai* may be separated by the robust basal part of the internal sac, *S. discreta* by the parameres gradually widened apically (in lateral view) and *S. cyrta* by the median lobe conspicuously arcuate, with tip reaching beyond parameres. The Papuan and Australian *S. papuana* Csiki, 1909, *S. ornata* (Pic, 1956), *S. piceoapicalis* Löbl, 1977 and *S. queenslandica* Löbl, 1986 have also aedeagi comparatively similar to that in *S. data*. The first three of them may be readily distinguished by their distinctive body coloration, *S. queenslandica* differs drastically by the shape of the parameres. Other Asian species that possess an internal sac with a basal hook are those originally described as *Baeotoxidium* Löbl, 1971, and since transferred to *Scaphobaeocera*: *S. elegans* (Löbl, 1971), *S. gagata* (Löbl, 1971), *S. indica* (Löbl, 1979), *S. lanka* (Löbl, 1971), *S. siamensis* (Löbl, 1990), and *S. yeti* (Löbl, 1992). These species are linked by the internal sac of the aedeagus with a basal vesicle containing spine-like structures, and probably form a monophyletic group.

Scaphobaeocea davaoana sp. n. Figs 11, 12

HOLOTYPE: ♂, E. slope Mt. McKinley, Davao Prov., MINDANAO IX.1946 / Elevation 6400 ft. / CNHM - Philippines Zool. Exped. (1946-47) F. G. Werner leg. (FMNH).

DESCRIPTION: Length 1.15 mm, width 0.62 mm, dorsoventral diameter 0.55 mm. Head and body uniformly ochraceous, appendages lighter. Thorax and elytra lacking microsculpture, not iridescent. Pronotal and elytral punctation extremely fine, barely visible at magnification 160x. Length ratio of antennomeres as: III 6: IV 7: V 8: VI 7: VII 11: VIII 5: IX 10: X 10: XI 14. Segment III comparatively short, about 3 times as long as wide. Segments IV to VI narrow, as wide as segment III. Segment VII almost 3 times as long as wide. Segment VIII slightly wider than segment VI, almost twice as long as wide. Segments IX and X distinctly larger than segment VII. Segment XI not widened apically, about 2.5 times as long as wide. Tip of scutellum exposed. Elytra without parasutural striae, sutural striae starting at margin of pronotal lobe, hardly curved at base. Hypomeron lacking longitudinal stria. Middle part of metaventrite flat, lacking stria or impression, coarsely and densely punctate, with long pubescence. Sides of metaventrite lacking microsculpture, sparsely, extremely finely punctate, with long pubescence. Mesocoxal lines with fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.03 mm long. Metepisterna flat, exposed portion about 0.05 mm wide, almost parallel-sided, with straight suture. Abdomen with striate microsculpture. Tibiae straight.



FIGS 11-13
(11, 12) *Scaphobaeocera davaoana* sp. n., aedeagus in dorsal and lateral views. (13) *Scapho - baeocera episternalis* sp. n., aedeagus in dorsal view. Scale bars = 0. 1 mm.

Male characters. Protarsi with segments 1 to 3 strongly widened, about as wide as protibiae. Aedeagus (Figs 11, 12) 0.37 mm long.

DISTRIBUTION: Philippines: Mindanao.

COMMENTS: The species resembles *S. nuda* Löbl, 1979 in external characters. Both possess not microsculptured thorax and elytra, very fine punctation, fairly similar antennae, and large exposed portion of metepisterna. *Scaphobaeocera davaoana* differs from *S. nuda* by the elytra not darkened at apex and lacking parasutural striae, and, more drastically, by its aedeagal characters. The new species may be distinguished from its congeners by following characters in combination: median lobe with robust, strongly prominent ventral processes, flagellum very narrow, and parameres wide in dorsal view, tapering in lateral view. The shape of the median lobe is similar to that in *S. uncata* Löbl, 1990, while the apically widened parameres differ conspicuously. Similar ventral processes are present in *B. amicalis* Löbl, 2003, *B. stipes* Löbl, 1971, *B. tenella* Löbl, 1990 and *B. uncata* Löbl, 1990. *Scaphobaeocera amicalis* and *B. uncata* differ conspicuously by the distal part of the median lobe strongly arcuate and reaching beyond tip of the parameres, *B. stipes* and *B. tenella* have the parameres widened in apical half and distinctive internal sac.

Scaphobaeocera episternalis sp. n. Figs 13-16

HOLOTYPE: ♂, Mindanao, Davao Prov., 25 km W of New Batan 20-22 May 1996, Bolm leg. (SMNS).

PARATYPES: 1 ♂, with the sama data as the holotype (MHNG). – 1 ♀, Mindanao, 30 km NW of Maramag, 13-17 May 1996 Bagongsilang, 1700m, Bolm leg. (SMNS).

DESCRIPTION: Length 1.23-1.26 mm, width 0.72-0.75 mm, dorsoventral diameter 0.72-0.75 mm. Head, most of body, femora and tibiae light rufous, apices of elytra, apex of abdomen and legs lighter, ochraceous, tarsi and antennomeres I to V or VI yellowish, antennomers VII to XI brown. Pronotum lacking microsculpture. Elytra microsculptured and weakly iridescent. Pronotal and elytral punctation sparse and extremely fine, hardly visible at magnification 100x. Length ratio of antennomeres as: III 8: IV 8: V 9: VI 8: VII 11: VIII 8: IX 12: X 12: XI 20. Segments III and IV equal, each about 3 times as long as wide. Segments V and VI slightly wider than segment IV, segment V 3 times as long as wide. Segment VII almost 3 times as long as wide. Segment VIII slightly wider than segment VI, about 2.5 times as long as wide. Segments IX and X each distinctly wider than segment VIII. Segment XI parallel-sided, distinctly wider than segment X, somewhat more than 3 times as long as wide. Tip of scutellum exposed. Elytra with parasutural striae, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron lacking stria. Middle part of metaventrite convex, lacking stria or impression, smooth on large central part, with dense and fairly coarse punctation at each side of center and with fairly long pubescence. Sides of metaventrite sparsely and very finely punctate, with long pubescence. Mesocoxal lines with fairly coarse marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02 mm long. Metepisterna flat, with exposed portion about 0.10-0.14 mm wide, widest in anterior half, suture broadly arcuate toward anterior angles, slightly curved or oblique apically. Abdomen lacking obvious microsculpture and with punctation hardly visible. Abdominal ventrite 1 with basal punctures coarse, not elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 strongly widened, segment 1 slightly wider than protibia. Aedeagus (Figs 13-16) 0.57-0.58 mm long.

DISTRIBUTION: Philippines: Mindanao.

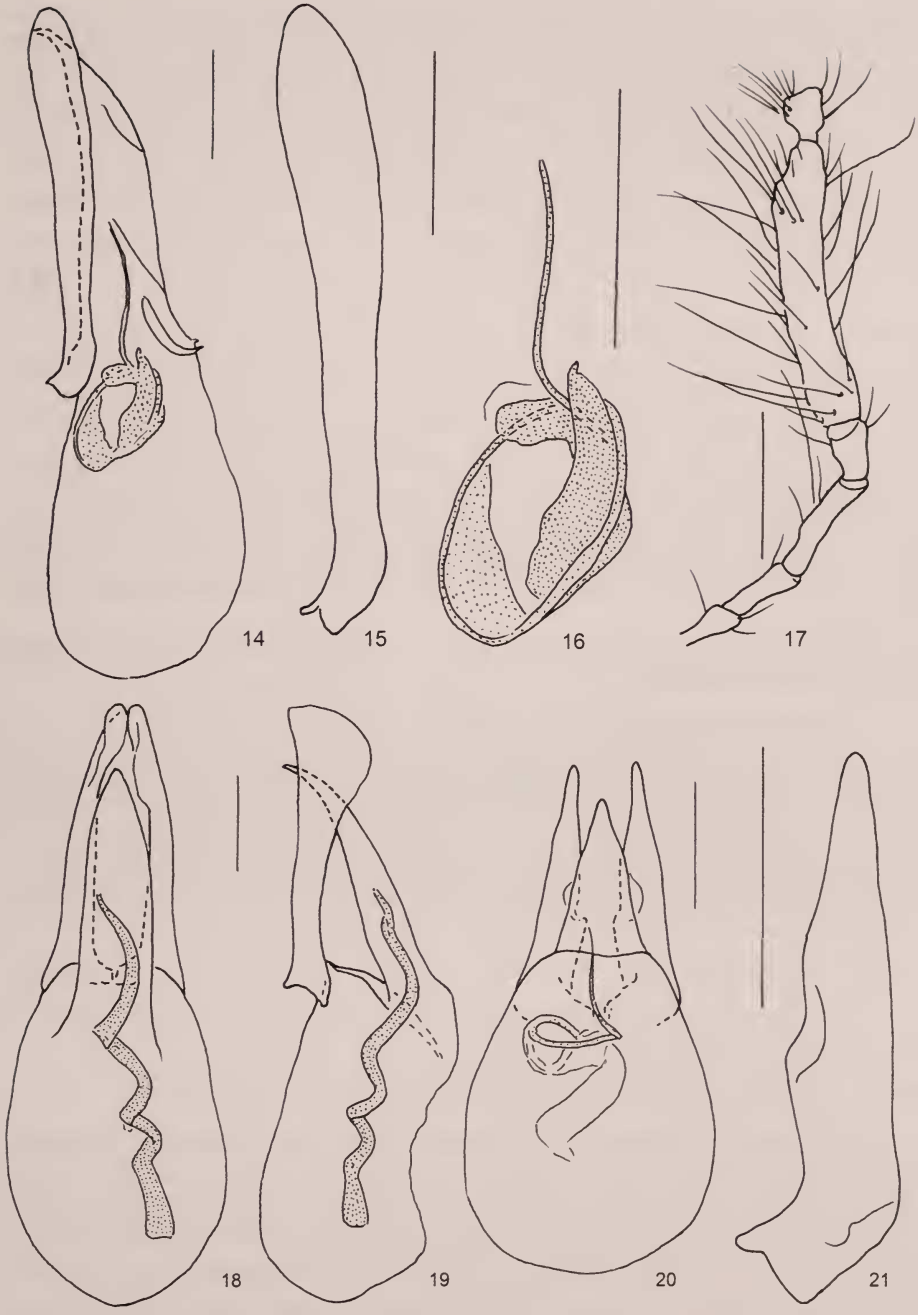
COMMENTS: This species may be readily distinguished from its Philippine congeners by its large metepisterna. It differs from most other species by the median lobe of the aedeagus that is not bent apically and has no distinct apicoventral processes. The internal sac with a complex base and very narrow flagellum reminds that in *S. tibialis* Löbl, 1984, while the parameres are wider and not arcuate as in the latter species.

Scaphobaeocea escensa sp. n. Figs 17-19

HOLOTYPE: ♂, Mindanao 30 km NW of Maramag, 13-17 May 1996, Bagongsilang, 1700m, Bolm leg. (SMNS).

PARATYPE: ♂, with same data as holotype (MHNG).

DESCRIPTION: Length 1.70 mm, width 1.0 mm, dorsoventral diameter 1.08 mm. Head and most of body uniformly very dark brown to blackish, abdomen and appendages reddish-brown. Pronotum lacking microsculpture, elytra with microsculpture



FIGS 14-21

(14-16) *Scaphobaeocera episternalis* sp. n., aedeagus in lateral view, paramere (15) and internal sac (16) enlarged. (17-19) *Scaphobaeocera escensa* sp. n., antennomeres III to VIII (17), aedeagus in dorsal and lateral views. (20, 21) *Scaphobaeocera excisa* sp. n., aedeagus in dorsal view (20), paramere in ventral view, enlarged. Scale bars = 0.1 mm.

hardly visible, not iridescent. Punctation extremely fine on pronotum, hypomera and lateral parts of metaventrite. Elytral punctation scattered, punctures much larger those on pronotum. Length ratio of antennomeres (Fig. 17) as: III 4: IV 8: V 12: VI 6: VII 30: VIII 5: IX 26: X 26: XI 26. Segment III comparatively short and wide, about 1.5 times as long as wide. Segment IV slightly narrower than segment III, about twice as long as wide. Segment V hardly wider than segment IV, 3 times as long as wide. Segment VI very short, gradually widened apically, wider than preceding segments, slightly longer than wide. Segment VII conspicuously long, more than 6 times as long as wide. Segment VIII very small, about as wide as segment VII and as wide as long. Segments IX and X similar to segment VII. Segment XI slightly widened apically. Tip of scutelum exposed. Elytra with sutural striae starting at pronotal lobe, parasutural striae present. Hypomeron not microsculptured, lacking longitudinal stria. Middle part of metaventrite flattened, with very short and shallow median stria, impunctate in center, distinctly punctate and with long pubescence laterally and behind center. Mesocoxal lines with very fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02 mm long. Metepisterna flat, about 0.05 mm wide, parallel-sided, with straight suture. Abdominal ventrite 1 with basal punctures fairly fine, partly elongate. Protibiae straight, meso and metatibiae weakly curved. Ventral side of profemora each with short, arcuate comb situated in level of trochanters.

Male characters. Protarsi with segment 1 to 3 strongly widened. Aedeagus (Figs 18, 19) 0.59-0.62 mm long.

DISTRIBUTION: Philippines: Mindanao.

COMMENTS: The very long antennomere VII, in combination with the small antennomere VIII, is diagnostic for this new species. *Scaphobaeocera zdenae* Löbl, 1992 has also strongly enlarged antennomere VII, but the antennomere VIII twice as long as wide. Besides, these two species may be easily distinguished by the pronotum and elytra distinctly microsculptured and iridescent in *B. zdenae* while they are not iridescent in *S. escensa*.

Scaphobaeocera excisa sp. n. Figs 20-23

HOLOTYPE: ♂, Luzon, Baguio, Mt. Santo Thomas, ca 1850m, 14.I.1980, L. Deharveng & J. Orousset leg. # 191 (MHNG).

PARATYPES: 3 ♂, with same data as the holotype; 2 ♂, Luzon, Baguio, Mt. Santo Thomas, ca 2150m, 14.I.1980, L. Deharveng & J..Orousset leg. #198 (all MHNG).

DESCRIPTION: Length 0.95-1.05 mm, width 0.60-0.63 mm, dorsoventral diameter 0.54-0.55 mm. Head and body ochraceous to blackish, appendages lighter. Thorax and elytra lacking microsculpture, not iridescent. Pronotal and elytral punctation very fine, dense, visible at magnification 32x. Length ratio of antennomeres as: III 6: IV 6: V 6: VI 6: VII 10: VIII 5: IX 9: X 9: XI 13. Segments III and IV similar, very narrow, each about 4 times as long as wide. Segments V and VI slightly wider than segment IV. Segment VII about 2.5 times as long as wide. Segment VIII about 1.3 times as long as wide. Segments IX and X hardly wider than segment VII. Segment XI not widened apically, almost 3 times as long as wide. Tip of scutellum exposed. Elytra without parasutural striae, sutural striae curved at base and extending along basal

margin to form short basal striae, ending in inner halves of basal elytral width. Hypomeron not microsculptured, lacking longitudinal stria. Middle part of metaventrite flat, lacking stria or impression, coarsely and densely punctate, with short pubescence. Sides of metaventrite lacking microsculpture, sparsely, extremely finely punctate, with long pubescence. Mesocoxal lines with coarse marginal punctures extending laterally along mesepimera; submesocoxal areas about 0.03 mm long. Metepisterna slightly convex, exposed portion about 0.05 mm wide, with arcuate suture. Abdomen with hardly visible punctulate microsculpture. Abdominal punctation fine, except comparatively distinct punctation on propygidium. Basal punctures of ventrite 1 partly elongate and coarse. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 slightly widened, much narrower than protibiae. Aedeagus (Figs 20-23) 0.35-0.38 mm long.

HABITAT: Moist ravine, in forest litter.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: The elytra with extended sutural striae and the shape of the parameres are diagnostic for this species. *Scaphobaeocera incisa* Löbl, 1990 has also emarginate parameres, but the emargination is subapical. Besides, it differs conspicuously in other aedeagal characters.

Scaphobaeocera hamata sp. n. Figs 24-26

HOLOTYPE: ♂, Philippines: Mt. Makiling, Laguna Prov., 4 km SE Los Banos 12-IV-1977 / berlese rotten logs L. E. Watrous (MHNG).

PARATYPES: 8 ♂, 3 ♀, with the same data as the holotype. – 3 ♂, 1 ♀, with the same data but 9-IV-1977. – 1 ♂, 1 ♀, with the same data but 8-IV-1977 / berlese leaf litter; 1 ♀, with the same data but 8-IV-1977 / berlese litter along stream. – 2 ♂, 1 ♀, with the same data but 11-IV-1977 / berlese debris under bark (all MHNG).

DESCRIPTION: Length 1.25-1.30 mm, width 0.66-0.70 mm, dorsoventral diameter 0.66-0.72 mm. Head and body ochraceous, appendages lighter, elytra sometimes slightly darkened near apex. Thorax and elytra microsculptured, elytra and often also pronotum weakly iridescent. Pronotal and elytral punctation very fine, dense, visible at magnification 32x. Length ratio of antennomeres as: III 5: IV 6: V 9: VI 8: VII 11: VIII 7: IX 11: X 10: XI 15. Segments III and IV similar, narrow, respectively 2.5 and 3 times as long as wide. Segments V and VI slightly wider than segment IV. Segment VII about 3 to 3.5 times as long as wide. Segment VIII about as wide as segment VII and almost twice as long as wide. Segments IX and X much wider than segment VII. Segment XI not widened apically, about 2.5 times as long as wide. Tip of scutellum exposed. Elytra without or with hardly visible parasutural striae, sutural striae starting at pronotal lobe. Hypomeron not microsculptured, lacking longitudinal stria. Middle part of metaventrite flat, with minute impression, densely punctate, pubescence short and very dense. Sides of metaventrite microsculptured, sparsely, extremely finely punctate, with fairly long pubescence. Mesocoxal lines with fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.01-0.02 mm long. Metepisterna slightly convex, exposed portion 0.05-0.06 mm wide, narrowed proximally, with straight suture. Abdomen with hardly visible striate microsculpture, punctation very fine. Basal punctures of ventrite 1 not elongate and fine. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 strongly widened, almost as wide as protibiae. Aedeagus (Figs 24-26) 0.32-0.42 mm long.

HABITAT: Evergreen rain forest, under bark, in rotten wood and leaf litter.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: The aedeagal characters suggest relationship to *S. data* and *S. monticola*. *Scaphobaeocera hamata* may be readily distinguished from the former by the lighter body color and from the latter by the sutural striae of the elytra reaching elytral base. See also comments under *S. data*.

Scaphobaeocera monticola sp. n. Figs 27-30

HOLOTYPE: ♂, Philippines: Luzon, Baguio, Mt. Santo Thomas, ca 2150m, 14.I.80, L. Deharveng & J. Orousset leg. # 198 (MHNG).

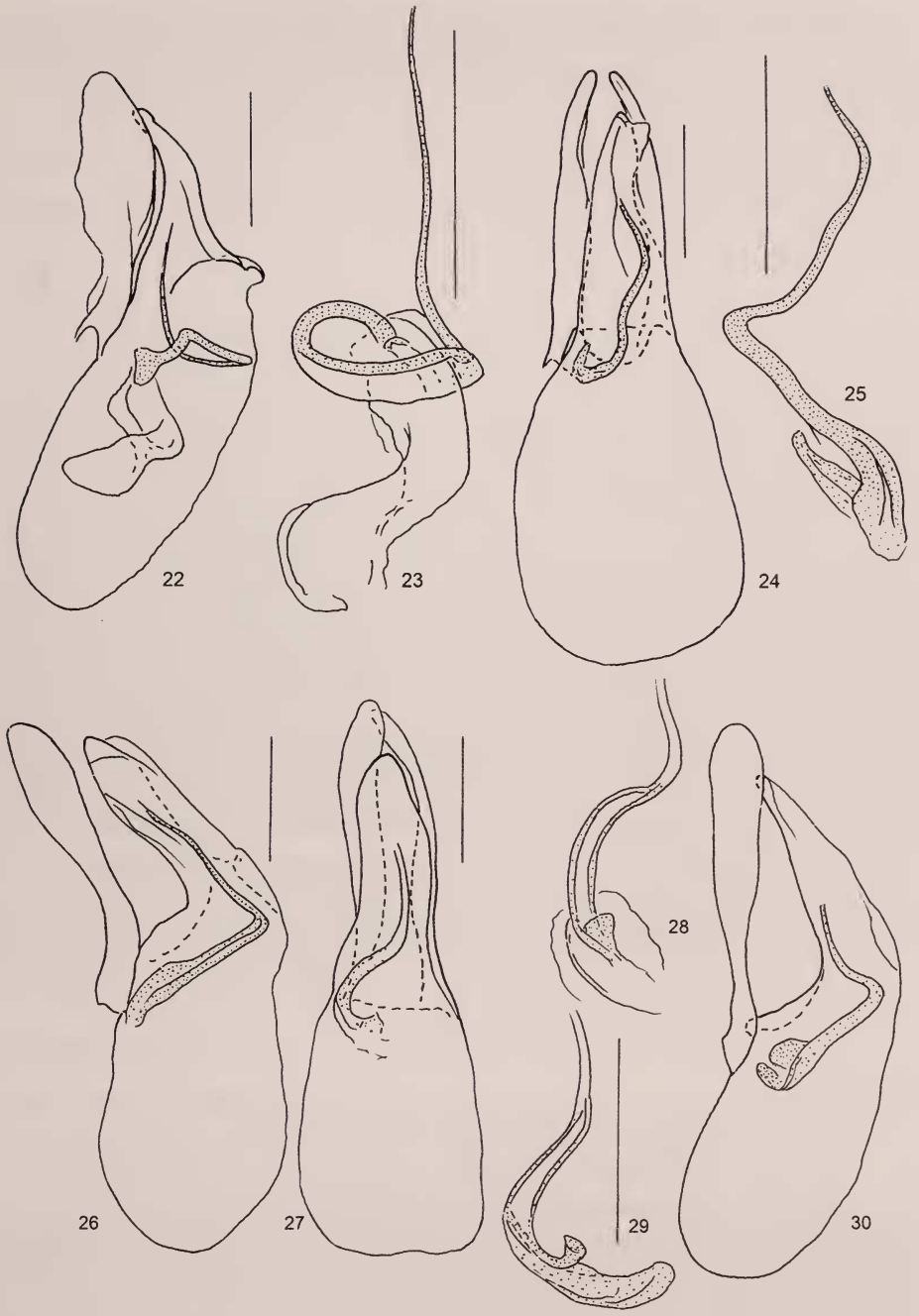
PARATYPES: 1 ♂, 1 ♀, with the same data as the holotype; 1 ♂, Luzon, Mountain Prov., Mount Data Lodge 2250-2300m, 23-24.XII.79, L. Deharveng & J. Orousset (MHNG).

DESCRIPTION: Length 1.20 mm, width 0.71-0.76 mm, dorsoventral diameter 0.71-0.75 mm. Body very dark reddish-brown to almost black, apices of elytra usually lighter, apical abdominal segments, legs and antennomeres I and II lighter, reddish-brown to ochraceous, antennomeres III to XI yellowish. Thorax, elytra and abdomen microsculptured and iridescent. Microsculpture on venter of thorax conspicuously coarse. Pronotal and elytral punctation very fine, hardly visible at magnification 100x. Length ratio of antennomeres as: III 5: IV 7: V 10: VI 8: VII 10: VIII 6: IX 10: X 10: XI 13. Segments III to VI evenly narrow, segment III about 2.5 times as long as wide, segments IV well 3 times as long as wide, V about 5 times as long as wide, VI about 4 times as long as wide. Segment VII about twice as wide as segment VI and almost 3 times as long as wide. Segment VIII slightly narrower than segment VII, about twice as long as wide. Segments IX and X wider than segment VII, each about 2.5 times as long as wide. Segment XI about 3 times as long as wide and as wide as segment X. Scutellum entirely concealed. Elytra with very fine parasutural striae, sutural striae starting posterior margin of pronotal lobe, not curved at base. Hypomeron without stria. Middle part of metaventrite flat, slightly impressed apically, without stria, with moderately dense, fine punctation and very short pubescence. Sides of metaventrite extremely finely punctate, with very short pubescence. Mesocoxal lines with very fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02-0.03 mm long. Metepisterna flat, with exposed portion about 0.04-0.05 mm wide, parallel-sided, with straight, deep suture. Abdomen with distinct microsculpture consisting of transverse striae. Abdominal ventrite 1 extremely finely punctate, with basal punctures fine, not elongate. Tibiae straight

Male characters. Protarsi with segments 1 to 3 distinctly widened, narrower than protibiae. Aedeagus (Figs 27-30) 0.39-0.41 mm long.

HABITAT: Mountain broad-leaf forest, in rotten wood and humus, in moss on log.

DISTRIBUTION: Philippines: Luzon.



FIGS 22-30

(22, 23) *Scaphobaeocera excisa* sp. n., aedeagus in lateral view (22), internal sac in dorsal view, enlarged (23). (24-26) *Scaphobaeocera hamata* sp. n., aedeagus in dorsal and lateral views, internal sac (26) enlarged. (27-30) *Scaphobaeocera monticola* sp. n., aedeagus in dorsal and lateral views, internal sac (29, 30) enlarged. Scale bars = 0.1 mm.

COMMENTS: This species is characterized by the elytra with shortened sutural striae. In addition, its comparatively coarse thoracic microsculpture is diagnostic. The aedeagus in *S. monticola* is similar to that in *S. data*, see also comments under the latter species.

Scaphobaeocera montivagans sp. n.

HOLOTYPE: ♂, Luzon: Philippines Mt. Pangao (2350m) nr. Data Ifugao Pv. 14.VII.1985, M. Sakai leg. (MHNG).

PARATYPE: ♂, Luzon: Mount Data 8.I.80, J. Orousset #165 (MHNG).

DESCRIPTION: Length 1.30-1.40 mm, width 0.76-0.82 mm, dorsoventral diameter 0.82-0.87 mm. Head and body dark reddish-brown, apical part of abdominal ventrite 1 and following ventrites lighter, reddish to ochraceous, appendages light reddish-brown to yellowish. Pronotum and hypomera lacking microsculpture, elytra, lateral parts of metaventrite, mesepimera, metepisterna and abdominal ventrites distinctly microsculptured. Elytra iridescent. Pronotal and elytral punctation very fine, hardly visible at magnification 100x. Length ratio of antennomeres as: III 5: IV 8: V 10: VI 7: VII 10: VIII 7: IX 11: X 10: XI 22. Segment III thickened apically, segments IV and V slightly narrower than segment III, IV about 4 times as long as wide, V about 5 times as long as wide. Segment VI distinctly wider than segment V, about twice as long as wide. Segment VII about twice as long as wide. Segment VIII slightly narrower than segment VII, almost twice as long as wide. Segments IX to XI about as wide as segment VII, IX and X each about twice as long as wide, XI about 4.5 times as long as wide. Tip of scutellum exposed. Hypomeron with stria. Elytra with very fine parasutural striae, sutural striae starting near base, slightly curved along pronotal lobe. Middle part of metaventrite somewhat convex, not impressed apically, without stria, with dense, fairly coarse punctation and rather long pubescence. Sides of metaventrite extremely finely punctate, with fairly long pubescence. Mesocoxal lines with very fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02-0.03 mm long. Metepisterna flat, with exposed portion about 0.08-0.09 mm wide, parallel-sided, with straight, deep suture. Abdomen with distinct microsculpture consisting of transverse striae. Abdominal ventrite 1 extremely finely punctate, with basal punctures fine, not elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 distinctly widened, narrower than protibiae.

HABITAT: Mountain broad-leaf forest, leaf and wood litter.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: This species resembles *S. complicans* from which it may be easily distinguished by the microsculpture pattern on the ventral side of body. The aedeagi of both males were lost. Nevertheless, the external characters of *S. montivagans* are unambiguously diagnostic.

Scaphobaeocera orousseti sp. n. Figs 31-34

HOLOTYPE: ♂, Luzon, Sagada s/résourgence d'Ambasing, 16.XII.79, L. Deharveng & J. Orousset #233 (MHNG).

PARATYPES: 1 ♂, Luzon, Mountain Prov. N. & NE Sagada, 15-19.XII.1979, L. Deharveng & J. Orousset #39. – 6 ♂, 2 ♀, Luzon, Mountain Prov. Sagada, Suyo: Tataya-An, 20.I.1980, L. Deharveng & J. Orousset # 201 (all MHNG).

DESCRIPTION: Length 1.18 mm, width 0.65 mm, dorsoventral diameter 0.68 mm. Body very dark reddish-brown, apices of elytra, apical abdominal segments and appendages light ochraceus to yellowish. Thorax, elytra and abdomen microsculptured, pronotal microsculpture barely visible. Pronotum not iridescent, elytra iridescent. Pronotal and elytral punctation very fine, distinct at magnification 50x. Length ratio of antennomeres as: III 6: IV 8: V 9: VI 8: VII 10: VIII 8: IX 10: X 10: XI 12. Segment III about 3 times as long as wide. Segment 4 about as narrow as segment III, segments V and VI slightly wider, each about 3 times as long as wide. Segment VII 3 times as long as wide. Segment VIII slightly wider than segment VI, about 3 times as long as wide. Segments IX to XI distinctly wider than segment VII, segment XI about 2.5 times as long as wide. Scutellum entirely concealed. Elytra with parasutural striae obsolete, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron without stria. Middle part of metaventrite flattened, with very shallow, minute impression in middle, dense and fairly fine punctation except on anterior area, and fairly long pubescence. Sides of metaventrite sparsely and very finely punctate, with long pubescence. Mesocoxal lines with fine marginal punctures, not extending laterally along mesepimera; submesocoxal areas about 0.03 mm long. Metepisterna somewhat convex, with exposed portion about 0.06 mm wide, parallel-sided, suture deep and straight. Abdominal ventrite 1 very finely punctate, with basal punctures fairly coarse and elongate.

Male characters. Protarsi with segments 1 to 3 moderately widened, narrower than protibiae. Aedeagus (Figs 31-34) 0.60 mm long.

HABITAT: Ravin, in leaf litter and humus.

DISTRIBUTION: Philippines: Luzon.

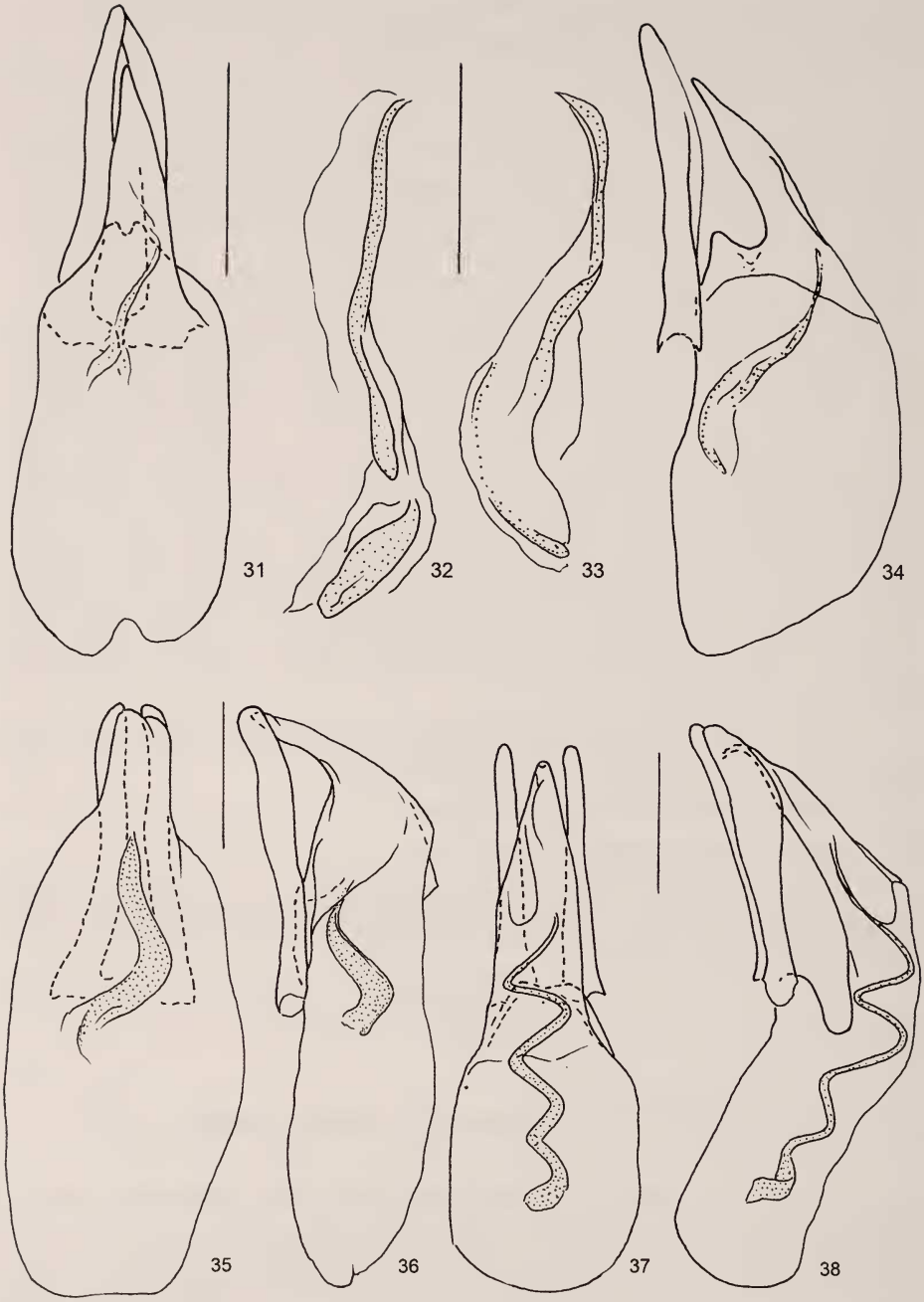
COMMENTS: This species is similar to *S. data* in external characters but may be distinguished by the elongate punctures at the base of the abdominal ventrite 1. See also comments under *S. davaoana*.

ETYMOLOGY: The species is named in honour of one of its collectors, Jean Orousset, Paris.

Scaphobaeocera palawana sp. n. Figs 35, 36

HOLOTYPE: ♂, Palawan, Central, Olangoan, 18 km NE San Rafael, sea level, I. Löbl, 5-6.XII.1995 (MHNG).

DESCRIPTION: Length 1.05 mm, width 0.60 mm, dorsoventral diameter 0.60 mm. Head and body very dark reddish-brown, apical abdominal segments and appendages lighter. Thorax and elytra lacking microsculpture, not iridescent. Pronotal and elytral punctation very fine, visible at magnification 100x. Length ratio of antennomeres as: III 5: IV 6: V 7: VI 6: VII 9: VIII 6: IX 9: X 10: XI 19. Segments III and IV equally narrow, segment IV 3 times as long as wide. Segments V and VI wider than segment IV, segment V about 3 times as long as wide. Segments VII and VIII each about twice as long as wide, segment VIII distinctly wider than segment VI. Segments



FIGS 31-38

(31-34) *Scaphobaeocera orousseti* sp. n., aedeagus in dorsal and lateral views, internal sac (32, 33) enlarged. (35, 36) *Scaphobaeocera palawana* sp. n., aedeagus in dorsal and lateral views. (37, 38) *Scaphobaeocera pseudotenella* sp. n., aedeagus in dorsal and lateral views. Scale bars = 0.1 mm for figs 31, 34-38, scale bar = 0.05 mm for figs 32, 33.

IX and X wider than segment VII, each almost twice as long as wide. Segment XI somewhat wider and almost 2 times as long as segment X, about 3 times as long as wide. Tip of scutellum exposed. Elytra without parasutural striae, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron lacking longitudinal stria. Middle part of metaventrite slightly convex, lacking stria or impression, center smooth, finely and densely punctate around center, and with short pubescence. Sides of metaventrite sparsely, extremely finely punctate. Mesocoxal lines with very fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02 mm long. Metepisterna flat, exposed portion about 0.06 mm wide, parallel-sided, with straight suture. Abdominal ventrite 1 lacking microsculpture, very finely punctate, with basal punctures hardly visible. Following ventrites with punctulate microsculpture. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 distinctly widened, narrower than protibiae. Aedeagus (Figs 35, 36) 0.38 mm long.

HABITAT: Edge of cultivated area, fungi on log.

DISTRIBUTION: Philippines: Palawan.

COMMENTS: The aedeagal characters of this species suggest relationship with *S. nuda* Löbl, 1979, although the apical part of the median lobe and the flagellum are notably shorter in the new species than in *S. nuda*. As *S. davaoana*, the new species lacks thoracic and elytral microsculpture and the hypomeral and parasutural striae, and has the exposed part of the metepisterna comparatively large. *Scaphobaeocera palawana* and *S. davaoana* may be readily distinguished by the length of the apical antennomere and the presence or absence of obvious abdominal microsculpture.

Scaphobaeocera pseudotenella sp. n. Figs 37, 38

HOLOTYPE: ♂, Luzon, Lagunas Prov., Mt. Makiling, 600m, summit rd, 21.XI.1995, leg. I. Löbl (MHNG).

PARATYPES: 1 ♀, with the same data as the holotype; 1 ♀, Luzon, Lagunas, Mt. Banahaw nr school about 1 km from Kinabuhayan, 500m, 26.XI.1995, leg. J. Kodada (both MHNG).

DESCRIPTION: Length 1.15-1.25 mm, width 0.70 mm, dorsoventral diameter 0.63-0.70 mm. Head and body uniformly reddish-brown, femora lighter, apical abdominal segments, tibiae, tarsi and antennae light brown or yellowish. Pronotum lacking microsculpture. Elytra, hypomera, lateral parts of metaventrite, mesepisterna, mesepimera and abdomen with distinct microsculpture. Elytra iridescent. Pronotal and elytral punctation very fine, barely visible at magnification 50x. Length ratio of antennomeres as: III 4: IV 6: V 8: VI 8: VII 13: VIII 7: IX 12: X 12: XI 15. Segment III short, about twice as long as wide. Segments IV to VI narrow, as wide as segment III, segment IV about 3 times as long as wide, segments V and VI each about 4 times as long as wide. Segment VII about 3 times as long as wide. Segment VIII about twice as long as wide. Segments IX to XI each slightly wider than segment VII, XI 3 times as long as wide. Scutellum entirely concealed. Elytra with parasutural striae, sutural striae starting at margin of pronotal lobe, hardly curved at base. Hypomeron lacking longitu-

dinal stria. Middle part of metaventrite flat, with median stria, distinctly, densely punctate, with short pubescence. Sides of metaventrite with fairly dense, fine punctation and fairly long pubescence. Mesocoxal lines with fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02 mm long. Metepisterna flat, exposed portion about 0.03-0.04 mm wide, parallel-sided, with straight suture. Abdominal microsculpture distinct, ventrite 1 iridescent. Basal punctures of ventrite 1 not elongate. Tibiae straight in female.

Male characters. Protarsi with segments 1 to 3 distinctly widened, narrowed than protibiae. Protibiae straight, mesotibiae slightly curved, metatibiae somewhat sinuate. Aedeagus (Figs 37, 38) 0.42 mm long.

HABITAT: Degraded evergreen rain forest, leaf litter.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: This species shares most of the aedeagal characters with *S. tenella* Löbl, 1990. However, it differs from the latter species by the shape of the parameral apices which are clearly distinctive in lateral view. See also comments under *B. davaoana.*

Scaphobaeocera pubiventris sp. n. Figs 39, 40

HOLOTYPE: ♂, Luzon, Mountain Prov., N. & NE of Sagada 15-19.XII.1979, L. Deharveng & J. Orousset #46 (MHNG).

PARATYPES: 4 ♂, 6 ♀ with the same data as the holotype (MHNG).

DESCRIPTION: Length 1.25-1.40 mm, width 0.70-0.75 mm, dorsoventral diameter 0.71-0.81 mm. Head and most of body uniformly dark rufous to blackish, apex of abdomen and legs lighter, ochraceous, antennae conspicuously light, yellowish. Pronotum with microsculpture hardly visible, distinctly iridescent in darker specimens, not or barely iridescent in lighter specimens. Elytra microsculptured and iridescent. Pronotal and elytral punctation very fine, irregular, elytra usually with scattered punctures larger than those on pronotum. Length ratio of antennomeres as: III 5: IV 8: V 9: VI 7: VII 12: VIII 7: IX 12: X 12: XI 17. Segment III comparatively short and wide, about twice long as wide. Segments IV to VI about as wide as segment III, segment V 3 times as long as wide. Segment VII about twice as long as wide. Segment VIII about 1.5 times as long as wide. Segments IX and X hardly larger than segment VII. Segment XI not widened apically, about 3 times as long as wide. Tip of scutellum exposed. Elytra with distinct parasutural striae, sutural striae starting at margin of pronotal lobe, slightly curved at base. Hypomeron not microsculptured, with longitudinal stria. Middle part of metaventrite flat, lacking stria or impression. Sides of metaventrite microsculptured, sparsely and finely punctate, with long pubescence. Mesocoxal lines with very fine marginal punctures not extending laterally along mesepimera; submesocoxal areas about 0.02 mm long. Metepisterna flat, with exposed portion about 0.04-0.05 mm wide, almost parallel-sided, with suture slightly curved apically. Abdomen with striate microsculpture, hardly visible on ventrite 1 in some specimens. Abdominal ventrite 1 with basal punctures fairly coarse, partly elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 strongly widened, about as wide as protibiae. Middle part of metaventrite, its anterior fourth excepted, completely covered by a very dense, flat patch of yellowish setae. Aedeagus (Figs 39, 40) 0.55-0.61 mm long.

Female characters. Metaventrite smooth in center, around center densely punctate, with short pubescence.

HABITAT: In rotten wood under a pine.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: This species has the median lobe of the aedeagus similar to that in *S. davaoana*, *S. amicalis* Löbl, 2003, *S. tenella* Löbl, 1990 and *S. uncata* Löbl, 1990. See also comments under *S. davaoana*. It differs drastically from these species by the much wider flagellum. The pubescence covering completely the middle part of the male metaventrite is diagnostic for this new species.

Scaphobaeocera sabapensis Löbl, 1990

MATERIAL EXAMINED: 3 ♂, 2 ♀, Luzon, Lagunas Prov., Mt. Makiling, 600m, summit rd, 21.XI.1995, leg. I. Löbl. – 1 ♀, same data but 20.XI, 450-500m. – 2 ♀, Luzon, Lagunas, Mt. Banahaw ca 1 km Kinabuhayan, 500m, 26.XI.1995, I. Löbl. – 1 ♀, Luzon, Lagunas, Mt. Banahaw above Kinabuhayan, 600-700m, trail to Crystalino 24.XI.1995, J. Kodada & B. Rygová leg. (all MHNG).

HABITAT: Evergreen rain forest, leaf litter.

DISTRIBUTION: Thailand, Philippines: Luzon.

COMMENTS: The aedeagi of the three Philippine males have the ventral wall of the apical process of the median lobe almost regularly arcuate and so slightly differ from those in the examined Thai specimens.

Scaphobaeocera serpentis sp. n. Figs 41-43

HOLOTYPE: ♂, Philippines: Mt. Makiling, Laguna Prov., 4 km SE Los Banos 9-IV-1977 / berlese leaf litter L. E. Watrous (MHNG).

PARATYPES: 1 ♂, 2 ♀ with the same data as holotype; 1 ♂, with the same data but 11-IV-1977 / berlese litter under bark L. E. Watrous (all MHNG).

DESCRIPTION: Length 0.95-1.05 mm, width 0.58-0.61 mm, dorsoventral diameter 0.53-0.58 mm. Head and most of body uniformly light ochraceous, appendages hardly lighter than body. Pronotum and elytra lacking microsculpture. Punctation extremely fine on pronotum, elytra, hypomera and lateral parts of metaventrite. Length ratio of antennomeres as: III 4: IV 6: V 7: VI 5: VII 11: VIII 4: IX 12: X. 12: XI 16. Segments III and IV evenly narrow, segment IV about twice as long as wide. Segment V slightly wider than segment IV, about 3 times as long as wide. Segment VI about twice as long as wide, wider than segment V. Segment VII much larger than segment VI, not quite 3 times as long as wide. Segment VIII conspicuously small, slightly longer than wide. Segments IX to XI almost even in width, hardly wider than segment VII, segment XI about 3 times as long as wide. Tip of scutellum exposed. Elytra without parasutural striae, sutural striae starting at margin of pronotal lobe, hardly curved at base. Hypomeron not microsculptured, without longitudinal stria.

Middle part of metaventrite slighly convex, without impression, densely punctate around smooth center, with fairly long pubescence. Mesocoxal lines with coarse marginal punctures, not extending laterally along mesepimera; submesocoxal areas about 0.03 mm long. Metepisterna flat, exposed portion about 0.08-0.10 mm wide, with suture notably deep, sulciform, weekly arcuate. Abdominal ventrite 1 very finely punctate, lacking obvious microsculpture, with basal punctures coarse, partly elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 strongly widened, about as wide as protibiae. Aedeagus (Figs 41-43) 0.25-0.27 mm long.

HABITAT: Evergreen rain forest, leaf litter.

DISTRIBUTION: Philippines: Luzon.

COMMENTS: This species shares with *S. episternalis* large metepisterna and mesocoxal lines with conspicuous, coarse marginal punctures. Both species may be distinguished by charaters given in the key above. In addition, the aedeagus is distinctive in *S. serpentis*.

Scaphobaeocera watrousi sp. n. Figs 44-46

HOLOTYPE: ♂, Philippines: Mt. Makiling, Laguna Prov., 4 km SE Los Banos 11-IV-1977 / berlese debris under bark L. E. Watrous (MHNG).

PARATYPES: 1 ♀, with same data as holotype. – 1 ♂, Philippines: Mt. Makiling, Laguna Prov., 4 km SE Los Banos 8-IV-1977 / berlese debris rotten log L. E. Watrous and berlese rotten log. – 1 ♂, 4 ♀, with same data but berlese leaf litter (all MHNG); 1 ♂, Tarragona, Leyte Is., Philippine Islds. VIII: 11: 1945 coll. and pres. by C. L. Remington (FMNH).

DESCRIPTION: Length 1.0-1.10 mm, width 0.60-0.65 mm, dorsoventral diameter 0.63-0.67 mm. Head and most of body uniformly light ochreous, appendages lighter than body. Pronotum lacking microsculpture. Basal half of elytra not microsculptured, apical half of elytra microsculptured, hardly iridescent. Punctation extremely fine on pronotum, elytra, hypomera and lateral parts of metaventrite. Length ratio of antennomeres as: III 5: IV 6: V 8: VI 5: VII 9: VIII 6: IX 10: X 10 : XI 22. Segments III to IV equally narrow, segment IV about 2.5 to 3 times as long as wide. Segment V hardly wider than segment IV, about 4 times as long as wide. Segment VI about 2 to 3 times as long as wide, wider than segment V. Segment VII much wider than segment VI, about twice as long as wide. Segment VIII almost as wide as segment VII and not quite 2 times as long as wide. Segments IX to XI almost equally wide, not or slightly wider than segment VII, segment XI about 4 to 5 times as long as wide. Tip of scutellum exposed. Elytra without parasutural striae, sutural striae starting at margin of pronotal lobe, hardly curved at base. Hypomeron not microsculptured, with longitudinal stria. Middle part of metaventrite slighly convex, without impression, smooth in center, very densely punctate laterally and posterior center, with fairly long pubescence. Mesocoxal lines with marginal punctures fine, distinct, not extending laterally along mesepimera; submesocoxal areas about 0.02 mm long. Metepisterna flat, exposed portion about 0.07-0.09 mm wide, narrowed anteriad, with suture straight and deep. Abdomen with distinct striate microsculpture. Abdominal ventrite 1 very finely punctate, with basal punctures fairly coarse, elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 strongly widened, about as wide as protibiae. Aedeagus (Figs 44-46) 0.32-0.34 mm long.

FIGS 39-46

(39, 40) *Scaphobaeocera pubiventris* sp. n., aedeagus in dorsal and lateral views; scale bar = 0.2 mm. (41-43) *Scaphobaeocera serpentis* sp. n., aedeagus in dorsal and lateral views, internal sac (42) enlarged. Scale bar = 0.1 mm for figs 41, 43; scale bar = 0.05 mm for fig. 42. (44-46) *Scaphobaeocera watrousi* sp. n., aedeagus in dorsal and lateral views, internal sac (45) enlarged. Scale bar = 0.1mm for figs 44, 46; scale bar = 0.05 mm for fig. 45.

HABITAT: Evergreen rain forest, rotted wood and leaf litter.

DISTRIBUTION: Philippines: Luzon and Leyte.

COMMENTS: The aedeagus of this species is similar to that in *S. palawana*. This new species may be easily distinguished from the latter by the lighter coloration of the body and the presence of hypomeral striae.

ETYMOLOGY: The species is named in honour of one of its collectors, Larry E. Watrous, Ballwin, MO, USA.

Scaphobaeocera werneri sp. n. Figs 47-51

HOLOTYPE: ♂, E. slope Mt. McKinley, Davao Prov., MINDANAO Elev. 3200ft. Lot #54. IX, 7-8. 1946; beating / CNHM Philippine Zool. Exped. (1946-47) F. G. Werner leg. (FMNH).

PARATYPES: 3 ♂ and 2 ♀, with the same data as the holotype (FMNH, MHNG).

DESCRIPTION: Length 1.0-1.10 mm, width 0.55-0.62 mm, dorsoventral diameter 0.58-0.64 mm. Head and most of body uniformly very dark reddish-brown, apex of abdomen and appendages light, ochraceous. Pronotum lacking microsculpture, elytra microsculptured and distinctly iridescent. Punctation extremely fine on pronotum, hypomera, elytra and lateral parts of metaventrite. Length ratio of antennomeres (Fig. 47) as: III 5: IV 6: V 8: VI 7: VII 10: VIII 7: IX 11: X 10: XI 15. Segment III comparatively short, about 3 times as long as wide. Segments IV to VI narrow, as wide as segment III. Segment VII about 2.5 times as long as wide. Segment VIII wider than segment VI. Segments IX and X distinctly larger than segment VII. Segment XI not widened apically, about 3 times as long as wide. Tip of scutellum exposed. Elytra with distinct parasutural striae, sutural striae starting at margin of pronotal lobe, hardly curved at base. Hypomeron not microsculptured, lacking longitudinal stria. Middle part of metaventrite flat, with or without minute, shallow impression, very densely punctate, with short pubescence. Lateral parts of metaventrite sparsely punctate, with striate microsculpture hardly visible at 100x magnification, and fairly long pubescence. Mesocoxal lines with fine marginal punctures fine, not extending laterally along mesepimera; submesocoxal areas about 0.01 mm long. Metepisterna flat, exposed portion about 0.01-0.02 mm wide, almost parallel-sided, with suture slightly curved. Abdomen with distinct striate microsculpture. Abdominal ventrite 1 with basal punctures fairly fine, partly elongate. Tibiae straight.

Male characters. Protarsi with segments 1 to 3 strongly widened, about as wide as protibiae. Aedeagus (Figs 48-51) 0.29-0.32 mm long.

HABITAT: Found by beating vegetation.

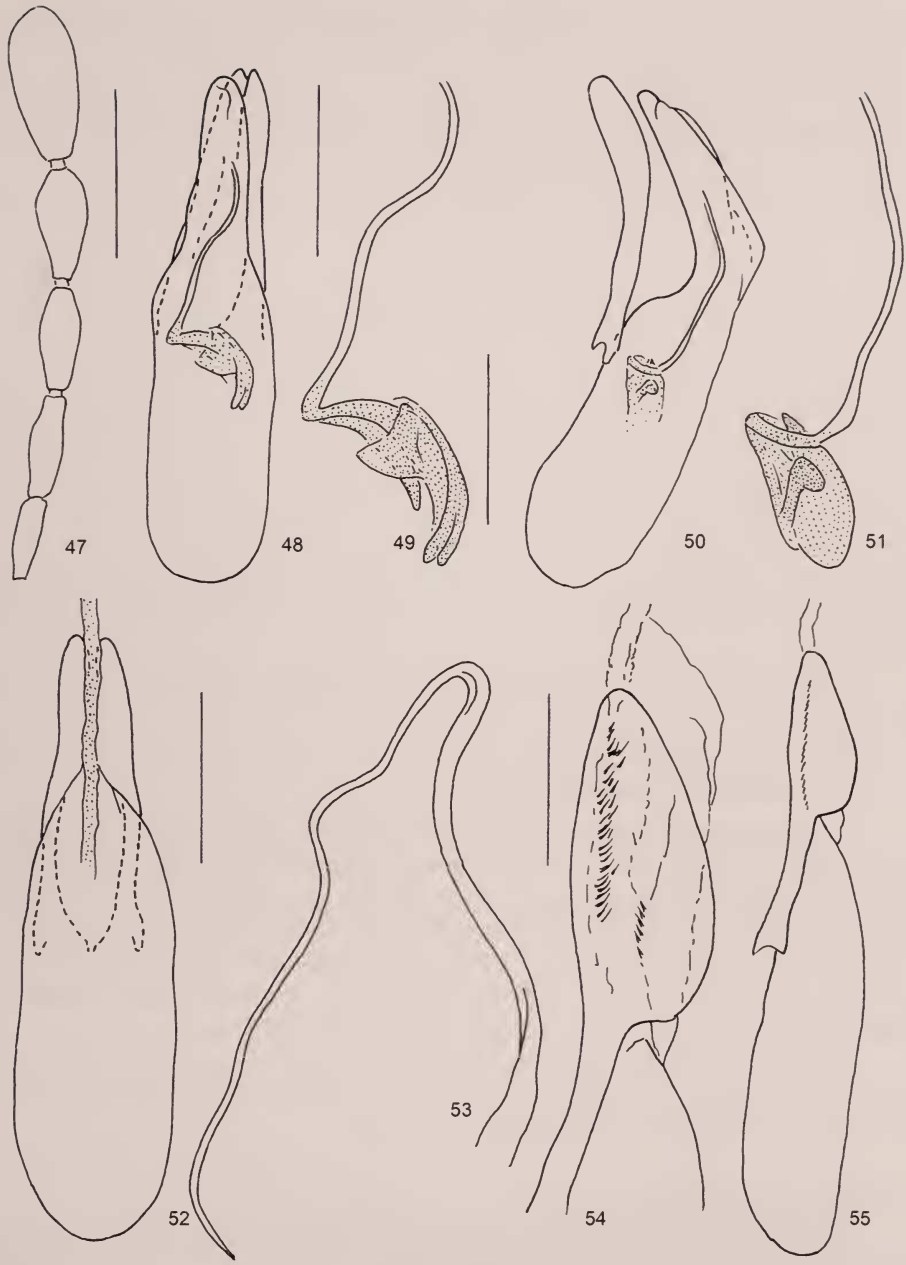
DISTRIBUTION: Philippines: Mindanao.

COMMENTS: The aedeagal characters suggest relationship with *S. hamata*, the shape of the base of the flagellum in these species is, however, clearly distinctive. This species may be distinguished from *S. hamata* also by its narrow metepisterna.

ETYMOLOGY: The species is named in honour of its collector, Floyd G. Werner.

Xotidium Löbl, 1992

The genus is distinctive by having two-segmented labial palpi. It comprises five species known at present only from Mauritius, Sri Lanka, Himalaya, and Queensland.



FIGS 47-55

(47-51) *Scaphobaeocera werneri* sp. n., contours of antennomeres VII to XI (47); aedeagus in dorsal and lateral views, internal sac (49, 51) enlarged. Scale bars = 0.1 mm for figs 47, 48, 50; scale bar = 0.05 mm for figs 49, 51. (52-55) *Xotidium tubuliferum* sp. n., aedeagus in dorsal and lateral views (52, 55), apical, tubular part of internal sac (53), apical part of aedeagus with extruded basal portion of internal sac (54). Scale bars = 0.2 mm for figs 52, 55; scale bar 0.1 mm for figs 53, 54.

An additional species is present within the examined material from the Philippines and described below.

Xotidium tubuliferum sp. n. Figs 52-55

HOLOTYPE: ♂, Tarragona, Leyte I. Philippine Islds VIII: II: 1945 / Col. & pres. by C. L. Remington /in rotting burned log (FMNH).

ADDITIONAL MATERIAL: 1 ♂ (lacking head and prothorax), with the same data as the holotype (MHNG).

DESCRIPTION: Length 1.60 mm, width 0.98 mm, dorsoventral diameter 0.93 mm. Body and head uniformly reddish-brown to piceous, femora, tibiae and basal abdominal segments hardly lighter, apical abdominal segments, antennae and tibiae distinctly lighter, almost yellowish. Length ratio of antennomeres as: III 10: IV 14: V 16: VI 15: VII 18: VIII 18: IX 15: X 18: XI 22. Segments III to VIII very narrow, segments VII and VIII similar, only slightly wider than segment III to VI, segments IX to XI much wider. Pronotal and elytral punctation very fine, visible at 50x magnification. Lateral parts of metaventrite and abdomen impunctate. Elytra each with fine basal stria joined to sutural and lateral striae; adsutural areas flat. Center of metaventrite almost flat, with few distinct punctures. Mesocoxal areas 0.07 mm long, shortest interval to metacoxae about 0.10 mm. Metepisterna flat, parallel-sided, about 0.08 mm wide. Abdomen impunctate, with punctulate microsculpture, metacoxal lines impunctate.

Male. Segments 1-3 of protarsi slightly widened. Aedeagus (Figs 52-55) 0.72 mm long.

HABITAT: Rotting burned log.

DISTRIBUTION: Philippines: Leyte.

COMMENTS: This new species resembles *X. uniforme* Löbl, 1992 by its comparatively large size and by the color of the body, in combination with the elytra having complete and joined basal and sutural striae. *Xotidium mauritianum* (Vinson, 1943) is almost as large and has also unicolored body, but differs drastically from its congeners by the shortened sutural striae and the absence of basal striae (see VINSON, 1943). *Xotidium tubuliferum* may be distinguished easily by its aedeagus lacking sclerotized flagellum, and by the long widened apical section of the parameres.

Both available males have completely extruded internal sac of the aedeagus. It consists of a simple tube narrowed in middle, longer than the entire median lobe. Very fine, spine-like structures are present in its basal part.

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